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EXAMINER

KIBLER, VIRGINIA M

ART UNIT PAPER NUMBER

2623

DATE MAILED: 11/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/730,573

Applicant(s)

KOWALD, JULIE RAE

Examiner

Virginia M Kibler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-83 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-83 is/are rejected.
- 7) ☒ Claim(s) 1, 11, 14, 16, 24, 29, 37, 41, 43, 45, 47, 51, 66, 68, 70, 75 and 5963 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claims 1, 11, 14, 16, 24, 29, 37, 41, 43, 45, 47, 51, 59, 63, 66, 68, 70, and 75 objected to because of the following informalities: "analysing" should be changed to "analyzing."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 33 and 34 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 33 recites the limitation "said editing" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 34 recites these limitations "said editing" in line 1, "said sequence" in line 2, and "said edit function" in line 2. There are insufficient antecedent basis for these limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 6/1, 11-16, 24-26, 29-31, 37, 39, 41-45, 51-53, 59, and 63-68 are rejected under 35 U.S.C. 102(e) as being anticipated by Potts et al. (6,593,956).

Regarding claim 1, Potts et al. ("Potts") discloses a method for automated classification of a digital image (Col. 7, lines 45-54) including analyzing the image for the presence of a human face (Col. 7, lines 59-61), determining a size of the located face with respect to a size of the image (Col. 10, lines 7-34), and classifying the image based on the relative size of the face with respect to the image (Col. 10, lines 35-52).

Regarding claim 6/1, Potts discloses classifying including associating a size of the located face with a set of predetermined thresholds for a size of a human face image (Col. 10, lines 35-52).

Regarding claim 11, Potts discloses analyzing including interpreting information provided with the image (Col. 8, lines 60-67, Col. 9, lines 1-2).

Regarding claim 12, Potts discloses the image including a frame of a digital video sequence of images (Col. 7, lines 59-61).

Regarding claim 13, Potts discloses the information is associated with other frames of the sequence (Col. 8, lines 60-67, Col. 9, lines 1-2).

Regarding claim 14, Potts discloses analyzing including detecting one or more regions of the image at which skin colored pixels are located in order to locate the face (Col. 8, lines 60-67, Col. 9, lines 1-2).

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Regarding claim 15, Potts discloses approximating the size of the located face by a height and width of a bounding rectangle that encloses the face (Col. 10, lines 7-34).

Regarding claim 16, Potts discloses analyzing the image for the presence of a human face (Col. 7, lines 59-61), determining a position of the located face with respect to a frame of the image (col. 8, lines 61-64), and classifying the image based on the relative position of the face with respect to the image frame (Col. 7, lines 32-54).

Regarding claims 24-26, the arguments analogous to those presented above for claims 11-13 are applicable to claims 24-26, respectively.

Regarding claims 37 and 59, the arguments analogous to those presented above for claim 1 are applicable to claims 37 and 59, respectively.

Regarding claims 39 and 41-44, the arguments analogous to those presented above for claims 6/1, 11, 12, 14, and 15, respectively.

Regarding claim 45, the arguments analogous to those presented above for claim 16 are applicable to claim 45.

Regarding claims 63-68, the arguments analogous to those presented above for claims 11-15 and 45 are applicable to claims 63-68, respectively.

Regarding claim 29, Potts discloses analyzing the image for the presence of a predetermined non-human component (Col. 10, lines 53-62), assessing the predetermined component with respect to at least one further criteria and where the criteria is met, classifying the image based upon the presence of the predetermined component (Col. 10, lines 63-67, Col. 11, lines 1-40).

Regarding claim 30, Potts discloses the predetermined component including a color of a distinct region of the image (Col. 10, lines 53-62).

Regarding claim 31, Potts discloses the criteria including relative motion of the predetermined component within the image (Col. 11, lines 1-13).

Regarding claims 51-53, the arguments analogous to those presented above for claims 29-31 are applicable to claims 51-53, respectively.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 3/1, 3/2, 4/1, 4/2, 6/2, 7/1, 7/2, 17, 32, 33, 54, 55, 83/1, 83/16, 83/37, 83/45, and 83/59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potts et al. (6,593,956) as applied to claims 1, 16, 37, 45, and 59 above, and further in view of Sethi et al. (*A Statistical Approach to Scene Change Detection*).

Regarding claims 2 and 17, Potts discloses classifying the image based on the relative size of the face with respect to the image (Col. 10, lines 35-52). Potts does not recognize classifying using a term which provides information about an intention of a photographer whom captured the image. However, Sethi et al. ("Sethi") teaches that it is known to use the relative size of the face with respect to the image to determine the shot type (Page 4, para. 3) which provides information about an intention of a photographer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the

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classification disclosed by Potts to include classifying using shot type as taught by Sethi because attributes of a shot provide a statistical characterization of a video and such a characterization is useful to differentiate between the styles of moviemakers (Sect. 1, para. 1).

Regarding claims 3/1 and 3/2, Sethi discloses classifying an image as a long-shot, or a far-shot (Page 4, para. 3).

Regarding claims 4/1 and 4/2, Sethi discloses classifying an image as a close-up (Page 4, para. 3).

Regarding claim 6/2, Potts discloses classifying including associating a size of the located face with a set of predetermined thresholds for a size of a human face image (Col. 10, lines 35-52).

Regarding claims 7/1 and 7/2, Sethi discloses classifying an image as a far shot (Page 4, para. 3). Sethi discloses the gradations of distances between the camera and the recorded scene do not imply a fixed measurable distance in each case but are rather defined with respect to the subject being recorded (Page 4, para 3). While Sethi does not explicitly state a predetermined threshold, it would have been obvious to one of ordinary skill in the art at the time of the invention to specify a threshold as a design choice.

Regarding claims 32 and 54, the arguments analogous to those presented for claims 1 and 2 are applicable to claims 32 and 54. Sethi discloses editing the sequence using the classification to form an output of sequence of images (Page 4, para. 4).

Regarding claims 33 and 55, Sethi discloses an edit function of segmenting the video sequence into a number of clips whereas those images that do not satisfy the edit function are omitted from the sequence (Abstract).

Regarding claims 83/1, 83/16, 83/37, 83/45, and 83/59, the arguments analogous to those presented for claims 1 and 2 are applicable to claims 83/1, 83/16, 83/37, 83/45, and 83/59. Sethi discloses an edited sequence of images formed through implementation of a series of images (page 4, para. 4).

8. Claims 34-36 and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potts et al. (6,593,956) as applied to claims 1, 16, 37, 45, and 59 above, and further in view of Sethi et al. (*A Statistical Approach to Scene Change Detection*) and Morag (6,324,545).

Regarding claim 34, Sethi discloses editing the sequence but does not appear to recognize using an editing template. However, Morag teaches that it is known to classify images by type and using a template (Col. 8, lines 3-8). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the classification and editing disclosed by Potts and Sethi to include using a template as taught by Morag because it is well known in the art and is an alternative way to classify the images.

Regarding claims 35-36, the arguments analogous to those presented above for claim 34 are applicable to claims 35-36. Morag discloses an effect consisting of visual effects including blurring (Col. 8, lines 26-46).

Regarding claims 56-58, the arguments analogous to those presented above for claims 34-36 are applicable to claims 56-58.

9. Claims 5/1, 5/2, 8/1, 8/2, 9/1, 9/2, 10/1, 10/2, 18/1, 18/2, 19/1, 19/2, 20/1, 20/2, 21/1, 21/2, 22/1, 22/2, 23/1, 23/2, 27, 28, 38, 40, 46-49, 50, 60-62, and 69-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potts et al. (6,593,956) as applied to claims 1, 16, 37,

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45, and 59 above, and further in view of Sethi et al. (*A Statistical Approach to Scene Change Detection*) and Chandler (*The 'Grammar' of Television and Film*).

Regarding claims 5/1 and 5/2, the arguments analogous to those presented above for claim 2 are applicable to claims 5/1 and 5/2. Sethi does not appear to recognize further classifying an image as an extreme close-up. However, Chandler teaches that it is known to classify an image as a big close-up, or an extreme close-up (Page 1 and 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the classification disclosed by Potts and Sethi to include extreme close-up as taught by Chandler because it is another type of shot used to emphasize a subject's feelings or reactions.

Regarding claims 8/1 and 8/2, the arguments analogous to those presented above for claims 5/1 and 7 are applicable to claims 8/1 and 8/2.

Regarding claims 9/1 and 9/2, the arguments analogous to those presented above for claims 4/1 and 7/1 are applicable to claims 9/1 and 9/2.

Regarding claims 10/1 and 10/2, Sethi discloses classifying an image as a medium shot (Page 4, para. 3). The arguments analogous to those presented above for claim 7/1 are applicable to claims 10/1 and 10/2.

Regarding claims 18/1, 18/2, 19/1, 19/2, 20/1, 20/2, 21/1, 21/2, 22/1, 22/2, 23/1, and 23/2, the arguments analogous to those presented above for claim 2 are applicable to claims 18/1, 18/2, 19/1, 19/2, 20/1, 20/2, 21/1, 21/2, 22/1, 22/2, 23/1, and 23/2. Sethi does not recognize classifying an image as a high-shot, eye-level shot, low shot, left shot, or right shot. However, Chandler teaches that it is known to classify an image according the direction and height from which the camera takes the scene (Page 2). Therefore, it would have been obvious to one of

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ordinary skill in the art at the time of the invention to have modified the classification disclosed by Potts and Sethi to include classifying images as high-shot, eye-level, low, left, or right shot as taught by Chandler because it provides further classification of the images based on the intentions of the photographer.

Regarding claims 27-28, 50, and 73-74, Chandler discloses that it is known to use the angle of shot as a classification. Chandler does not specify classifying an image as a Dutch shot with a predetermined angle of inclination. However, this is a well-known term in film grammar. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the classification disclosed by Chandler to include classifying an image as Dutch shot with a predetermined angle of inclination because it is well-known in the art and provides further classification of the image.

Regarding claim 38, the arguments analogous to those presented above for claims 3, 4, 7, and 8 are applicable to claim 38.

Regarding claim 40, the arguments analogous to those presented above for claims 38 and 10 are applicable to claim 40.

Regarding claim 46, the arguments analogous to those presented above for claims 18/1 – 23/1 are applicable to claim 46.

Regarding claims 47-49, the arguments analogous to those presented above for claims 11-13 are applicable to claims 47-49, respectively.

Regarding claims 60-62, the arguments analogous to those presented above for claims 38-40 are applicable to claims 60-62, respectively.

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Regarding claims 69-72, the arguments analogous to those presented above for claims 46-49 are applicable to claims 69-72, respectively.

Regarding claims 75-79, the arguments analogous to those presented above for claims 29-33 are applicable to claims 75-79, respectively.

10. Claims 80-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potts et al. (6,593,956) as applied to claims 1, 16, 37, 45, and 59 above, and further in view of Sethi et al. (*A Statistical Approach to Scene Change Detection*), Chandler (*The 'Grammar' of Television and Film*), and Morag (6,324,545).

Regarding claims 80-82, the arguments analogous to those presented above for claims 34-36 are applicable to claims 80-82, respectively.

Other Prior Arts

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,173,069 to Daly et al. for adapting quantization in video coding using face detection and visual eccentricity weighting;

U.S. Pat. No. 5,850,470 to Kung et al. for neural network for locating and recognizing a deformable object;

U.S. Pat. No. 6,111,580 to Kazama et al. for controlling an electronic device with user action;

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U.S. Pat. No. 6,535,639 to Uchihachi et al. for automatic video summarization using a measure of shot importance and a frame-packing method; and

U.S. Pat. No. 6,549,643 to Toklu et al. for selecting key-frames of video data.

Contact Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia M Kibler whose telephone number is (703) 306-4072. The examiner can normally be reached on Mon-Thurs 8:00 - 5:30 and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.



VK

**MEHRDAD DASTOURI
PRIMARY EXAMINER**

